

REMARKS

Claims 2-4, 6-10 and 15-42 remain in the application. Claims 1, 5 and 11-14 were previously canceled without prejudice. Claims 2-4, 6-10, 18-20 and 23 are hereby amended. No new matter is being added.

Claim Rejections--35 USC 102 and 103

Claims 2-4, 6-9, 15-17, 25-31, 33-34 and 36 were rejected under 35 USC 102 as being anticipated by Lee '060 (US 6,539,060).

Claim 10 was rejected under 35 USC 103(a) as being unpatentable over Lee '060 in view of Lei et al. (US 6,356,665).

Claims 18, 21 and 35 were rejected under 35 USC 103(a) as being unpatentable over Lee '060 in view of Ostermann (US 5,646,689).

Claims 19, 20 and 22-24 were rejected under 35 USC 103(a) as being unpatentable over Lee '060 in view of Etoh (US 5,859,932).

Claims 32 and 37-42 were rejected under 35 USC 103(a) as being unpatentable over Lee '060 in view of Avinash (US 6,757,442).

Applicants respectfully traverse these rejections with respect to the claims as they now stand.

THE CITED ART DOES NOT DISCLOSE OR SUGGEST "A COMBINED  
DOMAIN AND PATTERN ADAPTIVE TRANSFORM ... WHEREIN FILTER

COEFFICIENTS FOR AN INTERPOLATION FILTER ARE SCALED BY AN  
INVERSE OF A GRADIENT VALUE”

Amended claim 2 now recites as follows.

2. A method of processing all or a portion of a multi-dimensional signal with a domain composed of a collection of arbitrarily shaped domains via a multi-scale transform comprising the steps of:
  - a. Obtaining a multi-dimensional digital image frame;
  - b. Breaking the image frame into constituent arbitrary shaped domains, or given such a set, that cover all or a portion of the original multidimensional signal domain; and
  - c. **Performing a combined domain and pattern adaptive transform** on one or more of the collection of arbitrary shaped domains, wherein a filter comprising a convolution operator is applied to process pixels near a boundary of the domain, and **wherein filter coefficients for an interpolation filter are scaled by an inverse of a gradient value.**

(Emphasis added.)

As shown above, amended claim 2 is now limited such that it requires

**“Performing a combined domain and pattern adaptive transform** on one or more of the collection of arbitrary shaped domains, wherein a filter comprising a convolution operator is applied to process pixels near a boundary of the domain, and **wherein filter coefficients for an interpolation filter are scaled by an inverse of a gradient value.**” (Emphasis added.) The amendment to this claim element is supported in the original specification on pages 30 and 31 which discloses pattern adaptive transforms and combining a pattern adaptive transform

with a domain adaptive transform. In particular, page 30, lines 25-26 recites, “Each of the filter coefficients is then scaled by the inverse of the gradient value.”

Applicants respectfully submit that Lee ‘060 does not teach or suggest the above-recited claim element of amended claim 2. In particular, there appears to be no disclosure in Lee ‘060 of “a combined domain and pattern adaptive transform ... wherein filter coefficients for an interpolation filter are scaled by an inverse of a gradient value” as recited in the claim element. There are appears to be no disclosure or suggestion in the other cited references in regard to the above-recited claim element. Therefore, applicants respectfully submit that claim 2, as amended, now overcomes this rejection.

Dependent claims 6-10 and 15-42 depend from claim 2. Therefore, these claims also overcome their rejections for at least the same reasons as given in regard to claim 2.

Similar to claim 2, amended claim 3 recites “Performing a combined domain and pattern adaptive transform ... wherein filter coefficients for an interpolation filter are scaled by an inverse of a gradient value.” Therefore, applicants respectfully submit that claim 3 now overcomes this rejection for at least the reasons discussed above in relation to claim 2.

Similar to claim 2, amended claim 4 recites “Performing a combined domain and pattern adaptive transform ... wherein filter coefficients for an interpolation filter are scaled by an inverse of a gradient value.” Therefore, applicants respectfully submit that claim 4 now overcomes this rejection for at least the reasons discussed above in relation to claim 2.

Conclusion

For the above discussed reasons, applicants respectfully submit that claims 2-4, 6-10 and 15-42, as now amended, now overcome the rejections in the latest office action.

The Examiner is invited to call the undersigned for any questions.  
Favorable action is respectfully solicited.

Respectfully submitted,  
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